Docket #: S20-094

Antibodies against CCAR1 confer protection against cancer

Researchers at Stanford University and Johns Hopkins University have identified an antibody that is negatively associated with cancer in patients diagnosed with dermatomyositis. Although anti-TIF1-?-positive dermatomyositis patients have an increased risk of cancer compared to the general population, a substantial subgroup either never develop cancer or have less aggressive diagnoses. In their study, antibodies against CCAR1 were present in a third of anti-TIF1-?-positive patients, and was significantly negatively associated with cancer diagnosis within three years of the first onset of dermatomyositis symptoms. The inventors are in the process of developing ELISA diagnostic screens for anti-CCAR1 towards clinical and commercial use.

Stage of Development
The inventors have developed a prototype of a cancer-screening assay that uses the identified antibody and are working towards optimizing the method for clinical and commercial use.

Applications

- Cancer screening in dermatomyositis patients
- Possible target for cancer treatment or immunization

Advantages

- May improve cancer risk stratification - identification of a protective antibody may improve diagnosis accuracy and screening efficiency
- First in class, no biomarkers currently exist to stratify risk in dermatomyositis patients

Publications

- Fiorentino, D. F., Mecoli, C. A., Rosen, M. C., Chung, L. S., Christopher-Stine, L., Rosen, A., Casciola-Rosen, L. "Immune responses to CCAR1 and other dermatomyositis autoantigens are associated with attenuated cancer emergence." J Clin Invest. 2022;132(2)

Patents

- Published Application: WO2022271441
- Published Application: 20240302367

Innovators

- David Fiorentino
- Antony Rosen
- Livia Casciola-Rosen

Licensing Contact

Seth Rodgers

Licensing Manager, Life Sciences

Email